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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,508	10/17/2001	Jorgen Wiman	024444-954	9602

21839 7590 12/01/2003

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ALEXANDRIA, VA 22313-1404

EXAMINER

WALSH, BRIAN D

ART UNIT PAPER NUMBER

3722

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/913,508

Applicant(s)

WIMAN, JORGEN

Examiner

Brian D. Walsh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-10 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17 is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☒ Claim(s) 9-10, 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because they contain foreign text. The Examiner apologizes for noting this objection in the non-final Action, however, since the drawings were listed as pages "1/2" and "2/2," the Examiner was unaware the third page was included as a part of the drawings submitted by Applicant.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 8 is finally rejected, as necessitated by amendment, under 35 U.S.C. 103(a) as being unpatentable over Hansson et al. in view of Niebauer (U.S. Pat. No. 5,116,167).

Regarding claim 8, please refer to figures 1 and 2. Hansson et al. discloses an indexable cutting insert having a polygonal shape and including an upper surface (11), a lower surface (12), and an edge surface structure (13) interconnecting the upper and lower surfaces. An intersection between the edge surface structure and the top surface forming a main cutting edge (22), a

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secondary cutting edge (23) and a curved corner region (17) disposed between the main and secondary cutting edges.

Hansson et al. further discloses the corner region includes a radial edge (generally shown in the area of 23 in figure 2) and a corner edge (generally shown in the area of 22 in figure 2) wherein the radial edge and the secondary cutting edge are disposed on a first side of a bisector (B) of the corner region and the corner edge and main cutting edge are disposed on a second side of the bisector. It is clear from figure 1 that the radius of curvature of the radial edge is at least five times the radius of curvature of the curved edge.

Hansson et al. further discloses the top surface includes an edge-reinforcing land (21) extending along the radial edge and the curved edge. Again in figure 1, it is clear a portion of the land extending along the radial edge is smaller in width than a portion of the land extending along the curved edge.

However, Hansson et al. fails to disclose two planar sloping portions in the upper surface with a first portion having a greater angle of inclination than that of the second.

Niebauer discloses a cutting insert similar to the instant invention comprising various embodiments of sloping portions in the upper surface. The embodiment most similar to the instant invention is that which is disclosed in figure 4. It is clear that the upper surface (generally in the direction of 14) including a first downwardly sloping portion (50) extending from the land (22, 48) to a central floor portion on the upper surface (Col. 2, lines 48 – 50). Niebauer discloses a chip former depression (generally in the area of 32) formed in the sloping portion and spaced inwardly from the land. The chip breaker including a second sloping portion (measured at C). Niebauer discloses the slope of the first portion (B, 25 – 30 degrees, Col. 6,

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lines 13 – 14) is greater than that of the second sloping surface (C, ~4 degrees, Col. 6, lines 17 – 18). (Col. 6, lines 7 – 25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the corner regions of Hansson et al. to include the two sloping portions as taught by Niebauer since Niebauer teaches the use of the sloping regions in the corner to initiate a chip curling zone on the insert and provide for greater efficiency and universal use in a cutting insert (Col. 1, lines 25 – 34 and 48 – 56).

Allowable Subject Matter

1. Claims 15 – 17 are allowed.
2. Claims 9, 10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 9 and 15, numerous references in the art disclose cutting inserts with uniform land widths. McCreery discloses such a configuration for use in heavy duty cutting inserts (Col. 5, lines 30 – 32), however, since McCreery does not explicitly or inherently teach the use of the land widths in combination with the corner configuration, including the two radii, of the instant invention, it would not have been obvious to one having ordinary skill in the art at the time the invention was made to use uniform land widths in combination with this corner configuration.

Regarding claims 10 and 16, the prior art did not disclose nor render obvious a varying land width wherein the land width along a radial edge is 50-70% the width of the land portion

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extending along a curved edge as is set forth in the instant invention. Numerous examples of similar cutting inserts exist in the art that comprise varying land widths. Specifically, Paya (US Pat. No. 5,725,334) and Satran et al. (US Pat. No. 5,904,450) disclose the use of varying land widths, however none of the references in the prior art establish specific land widths at specific locations on the insert as is set forth in the instant invention.

Regarding claim 17, though Wiman et al. (U.S. Pat. No. 5,772,366) discloses what can be considered a straight secondary edge portion intersected by the corner bisector, it is clear that it does not intersect the primary edge portion to define an obtuse angle therewith. References in the art disclose similar configurations, however, they could not be combined with Hansson et al. and Wiman et al. without destroying the workability of the device.

Regarding claim 14, Wiman et al. (US Pat. No. 5,897,272) discloses a secondary straight edge on a recessed portion of a cutting insert similar to the instant invention. It is clear that this straight edge is intersected by a corner bisector, however, it is also clear that this bisector does not intersect the straight edge at a substantial midpoint thereof. Therefore, the prior art did not disclose nor render obvious this configuration of elements in a metal cutting insert.

Response to Arguments

3. Applicant's arguments with respect to claim 8 have been considered but are moot in view of the new ground(s) of rejection, necessitated by amendment.

Claim 8 now includes limitations regarding downwardly sloping portions along the top portion of the insert. A first sloping portion having a greater angle of inclination than a second

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portion's angle of inclination. This element is explicitly disclosed in Niebauer as well as patent application publication document (SU-1798045A, 1994).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

5. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this Final action.

Faxing of Responses to Office Actions (UPDATED)

6. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to **ALL OFFICE ACTIONS** directly into the Group at **(703) 872-9306**. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please

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identify the Examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the Examiner.

7. PLEASE NOTE: the **fax number in the above paragraph has changed**. It is to be used for all responses, **including after-final communications**.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walsh whose telephone number is (703) 605-0638. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



BDW
November 18, 2003



A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700